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USSR Report

AGRICULTURE

No. 1257

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MAJOR CROP PROGRESS AND WEATHER REPORTING

GRAIN CROP, HARVEST PROGRESS FOR AUGUST-OCTOBER IN RSFSR

[Editorial Report] The harvest in Altayskiy Kray is in full swing. Recent sunny days have accelerated the pace. On many fields two phase harvesting is passing the test. At enterprises in Zmeinogorskiy Rayon the gap between cutting and thrashing does not exceed 3 to 4 days. A good crop has grown up in Zmeinogorskiy Rayon which is thrashing almost 23 quintals of grain per hectare.(Moscow SOVETSKAYA ROSSIYA in Russian 5 Sep 80 p 1)

The grain area in Bashkiria stretches over more than 3 million hectares. Grain growers will sell 2.4 million tons of grain to the state. (Moscow SOVETSKAYA ROSSIYA in Russian 21 Aug 80 p 1)

Kolkhozes and sovkhozes in Bashkiria are thrashing about 17 quintals of grain per hectare. In Aurgazinskiy Rayon they are harvesting more than 25 quintals of grain per hectare, in Sterlitamakskiy Rayon 24 quintals per hectare, and in Ilishevskiy, Karmaskalinskiy and Ufimskiy rayons they are harvesting over 20 quintals per hectare. Harvesting and procurement of grain are going forth under adverse conditions, rains fall frequently.

Agricultural workers in Bashkiria will sell 2.4 million tons of grain to the state. (Moscow SOVETSKAYA ROSSIYA in Russian 13 Sep 80 p 1)

Kolkhozes and sovkhozes in Bashkiria have finished sending the second million tons of grain to the state. Workers in Aurgazinskiy Rayon were the first to fulfill their increased socialist pledges, selling 100,000 tons of grain to the state. (Moscow SOVETSKAYA ROSSIYA in Russian 25 Sep 80 p 1)

The grain has a difficult road to the granary this year in Chuvashia. Frequent rains in several places completely flooded the fields, and when harvest time approached in some places the combines had to be towed. In such a complicated situation the very concept of "harvest" took on a special meaning: it was necessary to literally save the grain. And many people became involved in this matter. Even sickles and scythes came into use.

The crop by the way did not turn out badly. The precise, well organized work of all links of the harvest-transport conveyer from the fields to the granaries took on a special significance in the complex situation. And it must be said that in many rayons in Chuvashia they learned this from the very first days of the harvest. All harvest and procurement operations were taken under unslackening party, managerial and agronomic control. (Moscow SOVETSKAYA ROSSIYA in Russian 30 Sep 80 p 1)

In Chelyabinskaya Oblast the southern rayons Bredinskiy, Varnenskiy and Kizil'skiy are reported doing the best in the harvest campaign. Over 1.5 million hectares in Chelyabinskaya have been cut, windrows have been thrashed on more than 1.3 million hectares. Grain here occupies 2 million hectares. At the same time it has been noted that enterprises in Chebarkul'skiy, Sosnovskiy, Yetkul'skiy, Kaslinskiy, Argayashskiy and certain other rayons harvest work has still not assumed the necessary scale, cutting and thrashing are behind schedule. (Moscow IZVESTIYA in Russian 30 Sep 80 p 1)

In Krasnodarskiy Kray grain sales to the state are continuing. Two million eighty thousand tons of grain have already gone to the elevators, 90 percent thereof is strong and valuable wheat. (Moscow SOVETSKAYA ROSSIYA in Russian 15 Aug 80 p 1)

Grain growers in Korenovskiy Rayon [Krasnodarskiy Kray] got 41.1 quintals of grain per hectare and sold 131,000 tons of high quality grain to the state, primarily strong wheat. (Moscow SOVETSKAYA ROSSIYA in Russian 19 Aug 80 p 1)

The grain harvest campaign has come to the fields in the Irtysh River area of Omskaya Oblast. The equipment operators have taken thousands of combines and windrowers out onto the grain expanses. Sovkhozes and kolkhozes in Poltavskiy, Sherbulakskiy, Isil'kul'skiy, Moskalenskiy, Mar'yanovskiy, Lynubinskiy and Kolosovskiy rayons are harvesting at a fast pace. As of today over 600,000 hectares of grain have been cut--more than one-fourth of the grain area. (Moscow SOVETSKAYA ROSSIYA in Russian 31 Aug 80 p 1)

Agricultural workers in Omskaya Oblast have begun the sale of the second million tons of grain from the new harvest to the state. Almost two-thirds of that arriving at the elevators is of strong and valuable varieties. Under conditions when bad weather and late ripening left no more than 10 to 15 days of good weather for the harvest, the masters of the Omskaya Oblast grain fields showed a high degree of skill in the use of the equipment. (Moscow SEL'SKAYA ZHIZN' in Russian 7 Oct 80 p 1)

In Orlovskaya Oblast despite the bad weather equipment operators at a majority of enterprises are quickly picking up the windrows. For Orlovskaya Oblast as a whole grain is being thrashed on up to 20,000 hectares daily. Mobile groups of combines are helping in this. They are being effectively shifted onto those stretches where the windrows are drying more quickly. (Moscow SOVETSKAYA ROSSIYA in Russian 29 Aug 80 p 1)

The pace of the harvest in Kurganskaya Oblast is much higher than last year--but it still is not satisfactory. It is the middle of September! Moreover, the weather forecasts are not comforting. Therefore, the party obkom has given the grain growers the task: to further increase the pace of the harvest despite the bad weather. Reliance is primarily on highly productive utilization of equipment and precise interaction of all links of the grain conveyer.

Nature has given the agricultural workers in Kurganskaya Oblast a difficult test, and not for the first time. There is never an easy harvest. But the Kurganskaya Oblast grain growers have sufficient experience, skill and mastery. (Moscow SOVETSKAYA ROSSIYA in Russian 17 Sep 80 p 1)

In Kurganskaya Oblast more than 1 million tons of high quality grain, primarily spring wheat has been sent to the state. Vargashinskiy, Mokrousovskiy, Tselinnyy, Kurtamyshskiy, Al'menevskiy and Safakulevskiy rayons are sending 3,000 to 4,000 tons of grain each to the elevators daily. (Moscow SEL'SKAYA ZHIZN' in Russian 11 Oct 80 p 1)

The harvest campaign on the grain fields of Novosibirskaya Oblast is coming into its own slowly, as if unwillingly. The first 10 days of September have passed and the harvest transport conveyer has still not attained the necessary pace. The wheat has not ripened everywhere.

What is to be done under these conditions? To await the ripening with arms folded or to get the harvest going on "matured" fields, selectively carrying out a rational maneuver of people and equipment? The party organization of Krasnozerskiy Rayon chose just this path.

In recent days the pace of the harvest has increased markedly. As of 8 September out of 2,198,000 hectares of grain in Novosibirskaya Oblast, 830,000 hectares had been cut. Thrashing of windrows, which under Siberian conditions is of great significance, has also been accelerated. (Moscow SOVETSKAYA ROSSIYA in Russian 10 Sep 80 p 1)

Many enterprises and whole rayons in Novosibirskaya Oblast have already gained the labor victory in this year's harvest. Workers in Moshkovskiy Rayon were the first to report fulfillment of the plan for grain sales to the state. They were followed by workers in Iskitimskiy, Novosibirskiy and Karasukskiy rayons. Above plan grain is now arriving at state procurement points from here.

Grain growers in Novosibirskaya Oblast have already sent over 1.1 million tons of grain to the state. There is every opportunity of successfully fulfilling the pledges. And these opportunities must be utilized fully. (Moscow SEL'SKAYA ZHIZN' in Russian 10 Oct 80 p 1)

Workers in the fields in Orenburgskaya Oblast knew how to grow a good crop under arid zone conditions. This year, for example, in May and the first half of June, during the period of plant development almost no rain fell. Early fall plowing of winter fallow, snow retention, good quality seed and the growing mastery of the equipment operators and specialists helped the grain to survive. The achievements of science and the leading experience were put into the service of the harvest. All of this allowed the sending to the state of over 2.8 million tons of grain. Workers in Svetlinskiy, Adamovskiy, Matveyevskiy and Buzulukskiy rayons made especially large contributions. (Moscow SEL'SKAYA ZHIZN' in Russian 7 Oct 80 p 1)

Today the kolkhozes and sovkhozes in Orenburgskaya Oblast have already sent 2.8 million tons of grain to the state and are nearing fulfillment of the "grain five-year plan." (Moscow SOVETSKAYA ROSSIYA in Russian 11 Oct 80 p 1)

In Saratovskaya Oblast it rained so often at the height of the harvest that you could neither walk nor ride across the fields. But the agricultural workers knew how to counteract the adverse elements with good organization, tenacity and bold technical and technological maneuvering. And, therefore, in many places in Saratovskaya Oblast field work is going forth in a precise, well organized manner. Party organizations in Fedorovskiy, Krasnokutskiy, Yekaterinovskiy, Ozinskiy, Rovenskiy, Kalininskiy and several other rayons were able from the first days of the harvest campaign to attain a precise and high quality of work on the fields of all links of the harvest conveyer. Precisely because of this the enterprises in these rayons delivered and continue to deliver the greatest quantity of grain to the state. (Moscow SOVETSKAYA ROSSIYA in Russian 7 Sep 80 p 1)

In Volgogradskaya Oblast agricultural workers have sold more than 2.1 million tons of grain to the state as of the third 10 days of September. (Moscow SOVETSKAYA ROSSIYA in Russian 26 Sep 80 p 1)

Astrakhanskaya Oblast will sell 158,000 tons of grain, including 140,000 tons of rice to the state. (Moscow SEL'SKAYA ZHIZN' in Russian 16 Aug 80 p 2)

Equipment operators in Altayskiy Kray have begun harvesting. The first tons of grain have been received at the procurement points. Grain growers will gather the grain from an area exceeding 4 million hectares in 12 to 14 working days. (Moscow SEL'SKAYA ZHIZN' in Russian 15 Aug 80 p 1)

The harvest front on the virgin lands of Altayskiy Kray is moving toward the western borders. Enterprises on the Rubtsovsko-Aleyskaya and Kulundinskaya Steppes--the primary suppliers of strong and durum wheat--have begun large-scale harvesting of grain. Procurement workers have given the green light to convoys with the new harvest. The wheat area in Altayskiy Kray amounts to more than 3 million hectares. Of this 78 percent is strong and valuable wheat. Harvesting is primarily by the two-phase method with a minimal interruption between cutting and thrashing. This year the grain growers in Altayskiy Kray will sell 1.5 million tons of strong and valuable wheat to the state. (Moscow SEL'SKAYA KHIZN' in Russian 27 Aug 80 p 1)

In Altayskiy Kray in September strong winds begin thrashing the grain which is still standing. And the loss of even 2 quintals per hectare means a shortfall for Altayskiy Kray of almost 1 million tons of grain. Prolonged autumn rains also do a lot of damage. (Moscow SEL'SKAYA ZHIZN' in Russian 20 Sep 80 p 1)

Agricultural workers in the Bashkir ASSR have sent 1.5 million tons of grain to the state. In order to fulfill the pledge they must send another 900,000 tons of grain. To accelerate the course of harvest work in connection with the uneven ripening of the crop in different climatic zones more than 1,000 combines and hundreds of vehicles have been shifted from the southern and western rayons to the northeast. (Moscow SEL'SKAYA ZHIZN' in Russian 16 Sep 80 p 1)

In the Bashkir ASSR more than 1.6 million tons of grain have been delivered to the grain reception points.(Moscow SEL'SKAYA ZHIZN' in Russian 17 Sep 80 p 1)

All the procurement enterprises in Belgorodskaya Oblast have begun accepting grain from the new harvest. The kolkhozes and sovkhozes have pledged to sell no less than 850,000 tons of grain to the state. As the first thrashings showed, there is the opportunity to exceed this goal--most enterprises grew a good crop, getting 25 to 30 quintals of grain per hectare. (Moscow SEL'SKAYA ZHIZN' in Russian 1 Aug 80 p 1)

In Belgorodskaya Oblast more than 800,000 tons of grain have been sent to the state. (Moscow SEL'SKAYA ZHIZN' in Russian 20 Sep 80 p 1)

The harvest pace is picking up in Bryanskaya Oblast. It is in full swing in Sevskiy, Suzenskiy, Starodubskiy, Pogarskiy and other rayons. Combine operators in Novozyokovskiy and Klimovskiy rayons have begun thrashing grain. (Moscow SEL'SKAYA ZHIZN' in Russian 13 Aug 80 p 1)

In Smolenskaya, Bryanskaya and Kaluzhskaya oblasts the grain is ripening rapidly. The situation demands that the harvest pace be increased, that every effort be devoted to the harvest, that both two phase harvesting and direct combining be utilized. By the way at several enterprises in Kaluzhskaya Oblast and at some kolkhozes and sovkhozes in Zhukovskiy and Komarichskiy rayons in Bryanskaya Oblast the combines are not even equipped with stalk lifters. (Moscow SEL'SKAYA ZHIZN' in Russian 31 Aug 80 p 1)

Chelyabinskaya Oblast will fulfill the plan--will send no less than 1.4 million tons of grain to the state. (Moscow SEL'SKAYA ZHIZN' in Russian 17 Sep 80 p 1)

Equipment operators have taken the harvest equipment out onto the fields of Kalininskaya Oblast. Every day more enterprises are involved in two phase harvesting. (Moscow SEL'SKAYA ZHIZN' in Russian 12 Aug 80 p 1)

The grain fields of Kurganskaya Oblast promise an abundant harvest this year; however there are some places where, unfortunately this is not the case. In a majority of rayons the vegetation of the grain crops went forth under favorable conditions, but in the south and southwest of the oblast a drought seized grain. Agricultural workers are cutting and thrashing winter rye, barley and peas.

At the same time the volume of work among the procurement workers is great. From the enterprises in Kurganskaya Oblast alone they will get 1.79 million tons of grain. The grain dryers are capable of drying 90,000 tons of grain a day. But with the arrival of grain with a moisture content of 19 percent, and there is almost no such grain in Siberia or the Urals. The traffic capacity for most grain is most often cut down by half. (Moscow SEL'SKAYA ZHIZN' in Russian 13 Aug 80 p 1)

In Leningradskaya Oblast the harvest is going forth at a fast pace despite the bad weather. (Moscow TRUD in Russian 24 Aug 80 p 1)

Equipment operators at enterprises in Northern Ossetia completed the harvest of winter grains in exactly the set time--10 calendar days. (Moscow TRUD in Russian 8 Aug 80 p 1)

Equipment operators at a majority of enterprises in Orlovskaya Oblast are doing well in picking up windrows despite the bad weather. Grain is being thrashed on 20,000 hectares a day in the oblast. (Moscow TRUD in Russian 29 Aug 80 p 1)

The harvest on the fields of Orlovskaya Oblast is gathering momentum. Grain has been cut on an area exceeding 3 million hectares. (Moscow SEL'SKAYA ZHIZN' in Russian 12 Aug 80 p 1)

The grain area in Ryazanskaya Oblast is one of the most extensive in the Non-Chernozen Zone. It occupies over 1.2 million hectares. Having grown a good crop on this area the agricultural workers have given their word to send no less than 700,000 tons of grain to the state. This is more than called for by the plan. While some enterprises are badly prepared for the rains which fall now and then and permit the equipment to stand idle these flaws are not immutable. In Ryazanskaya Oblast they are doing everything to quickly harvest the crop which has grown up and to successfully the pledges for grain sales to the state. [as printed] (Moscow SEL'SKAYA ZHIZN' in Russian 23 Aug 80 p 1)

Agricultural workers in Ul'yanovskaya Oblast, overcoming the whims of the weather, are accelerating the pace of the harvest and procurement of grain. (Moscow SEL'SKAYA ZHIZN' in Russian 12 Aug 80 p 1)

Agricultural workers in Uporovskiy Rayon yesterday became the first in Tyumenskaya Oblast to finish harvesting grain. They have sold more grain to the state than called for by the plan. (Moscow TRUD in Russian 5 Oct 80 p 1)

You do not get grain easily in Omskaya Oblast. You have to be able to harvest until the cold rains come, until the snow comes. The snow falls and melts away and the combines go out onto the fields again. The grain, of course, is moist. It has to be gotten to the dryer quickly, run through powerful dryers and put under the roof. (Moscow TRUD in Russian 24 Sep 80 p 1)

In several rayons in Orenburgskaya Oblast and the Bashkir ASSR they have had to harvest short, stunted crops. Rains have fallen beating the windrows to the ground. Here as never before the rising qualifications and creative initiative of the equipment operators and specialists showed. Units were used to turn the windrows and with their help grain was saved on thousands of hectares.

Two million five hundred thousand tons of grain have been sent to the state from enterprises in Orenburgskaya Oblast. More than 1.7 million tons of grain have been sent from enterprises in the Bashkir ASSR. (Moscow PRAVDA in Russian 20 Sep 80 p 1)

Agricultural workers in Rostovskaya Oblast have sent 1 million tons of grain to the state. The harvest campaign on the Don has reached its peak, everyday 100,000 to 200,000 tons of grain arrive at the reception points. The grain flow grows with every day. Workers in Yegorlykskiy, Peschanokopskiy and Bagayevskiy rayons have already reported finishing the harvesting of early grains. (Moscow KOMSOMOL'SKAYA PRAVDA in Russian 25 Jul 80 p 1)

Agricultural workers in Rostovskaya Oblast have sent the 2,000,000th ton of grain to the state. Grain and pulse crops have been thrashed over almost the entire area. The greatest contribution has come from enterprises in Zimovnikovskiy, Sal'skiy and Zernogradskiy rayons, which have sent from 100,000 to 150,000 tons of grain to the state. (Moscow SEL'SKAYA ZHIZN' in Russian 20 Aug 80 p 1)

Thrashing of grain is being completed on the fields near the Don. The harvest has been gathered completely at enterprises in 35 rayons. Kolkhozes and sovkhozes in Rostovskaya Oblast have sent 2 million tons of grain to the state. Grain procurement is continuing. The greatest quantity of grain right now is coming from kolkhozes and sovkhozes in Zimovnikovskiy, Dubovskiy and Millerovskiy rayons. (Moscow SEL'SKAYA ZHIZN' in Russian 22 Aug 80 p 1)

Grain growers in Saratovskaya Oblast have earlier than usual gone over to cutting the fourth and final million hectares. Productivity of the combine units has also been increased in thrashing windrows. (Moscow SEL'SKAYA ZHIZN' in Russian 15 Aug 80 p 1)

Grain growers in Saratovskaya Oblast have sent the millionth ton of grain from the new harvest to the state. The pace of grain procurement is picking up. (Moscow SEL'SKAYA ZHIZN' in Russian 20 Aug 80 p 1)

Workers in Saratovskaya Oblast have begun delivery of the second million tons of grain to the elevators. (Moscow SEL'SKAYA ZHIZN' in Russian 26 Aug 80 p 1)

Kolkhozes and sovkhozes in Saratovskaya Oblast have sent 1.5 million tons of grain to the elevators as of today. The greatest quantity of grain in Saratovskaya Oblast has come from Yershovskiy, Pugachevskiy, Fedorovskiy, Kalininskiy and Balashovskiy rayons. Now the intensity of the grain flow from the Trans-Volga has shifted to the right bank. (Moscow KOMSOMOL'SKAYA PRAVDA in Russian 5 Sep 80 p 1)

Grain reception points in the virgin land east of Orenburgskaya Oblast have begun procuring grain from the new harvest. With their involvement in the work the flow of grain has grown markedly and now amounts to 50,000 tons a day. However, the greatest burden is still on the western rayons, where for example, the Kurmanayevskiy grain reception point takes in up to 5,000 tons a day. Grain procurement has been efficiently organized in Novosergiyevskiy and Sol'-Ilekskiy elevators. In all more than 400,000 tons of grain have been sent to the state from enterprises in Orenburgskaya Oblast. (Moscow SEL'SKAYA ZHIZN' in Russian 13 Aug 80 p 1)

The harvest on the Steppes of Orenburgskaya Oblast is in full swing. Grain has been cut on 3 million hectares and thrashed on 2 million hectares. Kolkhozes and sovkhozes in the southern and central rayons of Orenburgskaya Oblast, where the grain ripens more quickly, are already finishing thrashing. Agricultural workers in Ilekskiy Rayon were the first to finish. (Moscow SEL'SKAYA ZHIZN' in Russian 15 Aug 80 p 1)

The harvest at the kolkhozes and sovkhozes of Orenburgskaya Oblast is entering the final phase. Early grain crops have been cut on 3.5 million hectares of the 4.8 million hectares to be cut. Almost 2.5 million hectares of grain have been thrashed. Everyday 50,000 to 60,000 tons of grain are sent to the state. Kolkhozes and sovkhozes in Orenburgskaya Oblast have sent a million tons. The grain growers in Ilekskiy, Novosergiyevskiy, Pervomayskiy, Tashlinskiy and Sol'-Iletskiy rayons have made the greatest contribution. The center of the harvest has shifted to the eastern virgin land rayons and to the northern zone, where a good crop has grown up this year. (Moscow SOVETSKAYA ROSSIYA in Russian 19 Aug 80 p 1)

The tempo of grain sales to the state is picking up in Orenburgskaya Oblast. One and one-half million tons of grain have been delivered to the elevators. (Moscow TRUD in Russian 3 Sep 80 p 1)

The harvest in Orenburgskaya Oblast began in the virgin lands and northern rayons, where the grain turned out much more abundantly than in the central and southern rayons. Thus, agricultural workers in Buguruslanskiy, Asekeyevskiy, Matveyevskiy and Severnyy rayons are gathering an average of from 17 to 19 quintals of grain per hectare. They are transferring the equipment into this zone from enterprises in the south and center where the harvest is basically finished. Despite the rain equipment operators in Orenburgskaya Oblast are thrashing up to 150,000 hectares of grain a day. This corresponds to last year's better results. By the middle of August more than 3 million hectares had been cut and more than 2 million hectares had been thrashed of the 4.8 million hectares of grain. Grain is being sent to the state. (Moscow SEL'SKAYA ZHIZN' in Russian 16 Aug 80 p 1)

CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

'COLDER THAN NORMAL' OCTOBER EXPECTED IN USSR

LD061617 Moscow PRAVDA in Russian 3 Oct 80 p 6

[Unattributed forecast: "The Weather in October: the Leaves Are Falling"]

[Text] October, a PRAVDA correspondent was told by the USSR Hydrometeorological Center, is expected to be colder than normal.

In Murmanskaya Oblast, the Karelskaya ASSR, Arkhangelskaya Oblast and the Komi ASSR, during a cold spell in the second 10-day period frosts will reach minus 7-12 degrees at night and minus 5 degrees by day, and minus 15-18 degrees at night in the Komi ASSR. For the rest of the time there will be 0-5 degrees of frost at night, with daytime temperatures of plus 2-7 degrees.

In Leningradskaya, Vologodskaya, Pskovskaya and Novgorodskaya oblasts the temperature will be 0-5 degrees at night and 6-11 degrees by day. In cold spells there will be 3-9 degrees of frost by night, with daytime temperatures around zero.

In the Baltic area and Belorussia temperatures will be 3-8 degrees at night and 8-14 by day. There will be precipitation in the second half of the month.

In oblasts of the Central and Central Chernozem regions precipitation during the month will be less than normal. Temperatures will be minus 2 to plus 4 at night, and plus 4-10 by day. Frosts down to minus 3-7 are possible at night.

In the Volga-Vyatka region and northern oblasts of the Volga region daytime temperatures will be from 8-13 to 3-8 in the first half of the month. Light frosts will occur on some nights. In the second half of the month temperatures will fall to 5-10 degrees of frost by night. A rise in temperature is possible in the last few days of the month.

In the North Caucasus and the lower Volga the thermometer will register 15-20 degrees by day and 5-10 degrees at night in the first 10 days. Then it will grow cooler: 7-12 degrees by day and minus 1 to plus 4 at night.

On the South Crimea coast and the Black Sea coast of the Caucasus temperatures will be 7-12 degrees at night and 15-20 degrees by day.

In the Ukraine and Moldavia it will be 3-8 degrees at night and 8-13 degrees by day.

In the Transcaucasus it will be 25-30 degrees by day in the first 10 days. Temperatures will then fall to 6-11 degrees at night and 16-21 degrees by day.

In the agricultural oblasts of West Siberia it will be 7-12 degrees by day in the first half of the month. Light frosts are possible on some nights. In the second half of the month night frosts could reach minus 3-7, with daytime temperatures around zero.

In Kazakhstan temperatures will be 20-25 degrees by day in the first 10 days. For the rest of the time temperatures will be from 0-5 degrees down to minus 7-12 at night, and from 10-15 degrees down to 0-minus 5 by day.

In the central Asian republics in the third 10-day period a sharp drop in temperature is possible: 4-9 degrees by day and light frosts by night.

Over the greater part of eastern Siberia and the Far East October is expected to be colder than normal.

CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

EXPECTED GRAIN HARVEST SHORTFALL--According to a source close to agriculture officials in Moscow the USSR will only produce 190 million tons of wheat this year, in other words 45 million tons less than the plan target. Owing to atmospheric conditions the wheat ripened very late and harvesting, 93 percent of which was completed at the beginning of the week, began 1 month late in some regions. [Text] [LD101111 Paris LE MONDE in French 10 Oct 80 p 3]

CSO: 1853

POST HARVEST CROP PROCESSING

BRIEFS

POTATO HANDLING, STORAGE--Moscow PRAVDA in Russian 4 October 1980 carries on page 3 a 900-word commentary by V. Polyakov entitled "Potatoes Seeking Shelter" and published under the rubric "Reflecting on Letters." The article begins by stating that "the potato harvest this year is not universally good," and it is therefore necessary to ensure that all successful crops are harvested and handled properly. Polyakov then proceeds to examine letters to the editor, mainly from Permskaya Oblast, referring to what he calls "not infrequent" cases of band handling of potatoes. Polyakov reports cases where the population is delivering potatoes to procurement centers but the latter have either no storage space left or have run out of crates and are forced to discontinue operations; and where procurement organizations are short of transport and have to stop buying the potatoes because of the pileup. Polyakov says that cooperative workers, who could supply a lot of surplus potatoes, need transport. It "should come from enterprises in Perm and other cities in the oblast. But schedules are often not met, and trucks arrive late," when the potatoes have already piled up. Polyakov quotes a letter stating that people are intending to plant fewer potatoes next spring when, in fact, "potato supplies to big cities could be increased." Can this be allowed to happen? "The Permskaya Oblast Potrebsoyuz Board and Oblispolkom can answer that one," Polyakov writes. No further processing planned. [LD081017 Editorial Report]

CSO: 1824

LIVESTOCK FEED PROCUREMENT

BRIEFS

FEEDING BREAD TO LIVESTOCK--Moscow SOVETSKAYA ROSSIYA in Russian on 5 October 1980 publishes on page 2 the rubric "Reportage From an Operation" a 1,600-word report by correspondents Yu. Burov, V. Ogurtsov and I. Pyrkh entitled "Castoff Hunk." The report relates how considerable quantities of bread get wasted during school mealtimes in Tyumenskaya Oblast and in restaurants in Permskaya Oblast, this being largely due to the fact that schoolchildren and customers are provided with more bread than they want to eat. It also tells how Bryanskaya Oblast stores sell large quantities of loaves and other bread products to customers, who then feed them to privately-owned livestock because animal feedstuffs are not available. The report is followed by a note from the newspaper's editors, which states in part: "The editors reckon that the republic ministries of education, trade, agriculture, procurement and food industry and all who wish to participate in an important discussion, which is of not only great educational and economic but also political significance, will express their opinion on all these issues." [LD090927 Editorial Report]

CSO: 1824

REVIEW OF WORK OF DAIRY INDUSTRY IN USSR IN 1979

Moscow MOLOCHNAYA PROMYSHLENNOST' in Russian No 5, May 80 pp 38-44

[Article by V. D. Filippos, engineer, USSR Ministry of the Meat and Dairy Industry: "Brief Results of Dairy Industry Work in 1979"]

[Text] The plan for state milk procurements, not including the additional assignment, was fulfilled by 94 percent. But it was fulfilled, including additional assignments, in the Uzbek SSR, the Kazakh SSR, the Georgian SSR, the Azerbaijan SSR, the Moldavian SSR, the Kirgiz SSR, the Tajik SSR, the Armenian SSR and the Turkmen SSR.

In 1979 work was continued to develop and strengthen direct ties between production associations and enterprises of the dairy industry, on the one hand, and kolkhozes and sovkhozes, on the other, through changing over to receiving milk directly on the farms and shipping it by specialized industrial transportation. This method was used to deliver 10.4 million tons of it to enterprises, or 24 percent more than in 1978. In the Estonian SSR, 70.5 percent of the entire volume of milk that was procured was received directly on the farms and shipped by central transportation, in the Tajik SSR --46.4 percent, in the Moldavian SSR -- 44 percent, in the Belorussian SSR --33.5 percent, in the Georgian SSR -- 20.7 percent and in the Kirgiz SSR -- 20.5 percent.

In order to provide the enterprises with higher-quality milk, measures were taken to step up control over the receipt of it in keeping with the GOST. In 1979, 72.2 percent of the milk that was received was of grade I (in 1978 -- 69 percent). In the Ukrainian SSR milk of grade I amounted 87.3 percent, in the Belorussian SSR -- 81.2 percent, in the Uzbek SSR -- 86.5 percent, in the Lithuanian SSR -- 87.5 percent, in the Latvian SSR -- 86.6 percent, in the Estonian SSR -- 91.9 percent and at enterprises of Soyuzkonservmoloko -- 74.7 percent.

In 1979 production associations and enterprises of the dairy industry produced 231,000 tons more whole milk products, calculated in terms of milk, than they did in 1978, 9,200 tons more fatty cheese, 4,000 tons more dehydrated milk, including whole milk substitutes, and 17,000 tons more nonfat dairy products.

During 4 years of the five-year plan 129,000 tons of animal fat were produced in excess of the plan, 74,700 tons of fatty cheese, 5,600 of dry whole milk, 42.4 million standard cans of canned milk and 264,000 tons of nonfat milk products calculated in terms of nonfat milk.

Measures were taken in the industry to increase dairy product resources. In 1979 production associations and enterprises manufactured 726,400 tons of peasant butter, 156,200 tons of gourmet butter and 90,800 tons of table butter, which comprises 88.6 percent of the overall output. As compared to 1978, 30 percent more milk and kefir with a 2.5-percent fat content was produced, 10 percent more sour cream with 20- and 25-percent fat content, and the output of products with fruit and berry fillers increased 2.3-fold.

At the same time the assignment was not fulfilled for individual kinds of dairy products with a reduced fat content by the industries of the RSFSR, the Ukrainian SSR, the Uzbek SSR, the Georgian SSR, the Azerbaijan SSR and the Kirgiz SSR.

Production associations and enterprises improved the utilization of nonfat milk and buttermilk somewhat. In 1979, 41 percent of all the resources were used for the output of these products (37.8 percent in 1978). The output of food products in terms of the amount of nonfat milk that was used increased by 3 percent.

This raw material was utilized most fully by enterprises of the RSFSR, the Kazakh SSR, the Georgian SSR, the Azerbaijan SSR, the Kirgiz SSR and the Tajik SSR.

But in addition to this, there was above-normative return of this raw material by the industries of the Ukrainian SSR, the Belorussian SSR, the Uzbek SSR, the Lithuanian SSR, the Turkmen SSR and the Estonian SSR.

The utilization of whey was improved and the output of sodium caseinate was increased by 22 percent, condensed -- by 50 percent, dry whey -- by 45 percent, raw milk sugar -- by 2 percent, and refined lactose -- by 4 percent. The output of these products accounted for 20.2 percent of all the whey resources while this figure was 18.4 percent in 1978.

Whey was utilized most fully by enterprises of the Armenian SSR, the Estonian SSR, the Tajik SSR and the Georgian SSR.

The output of dairy products in wrapped and packaged form increased. During 1979, 2 percent more whole milk in bottles was produced than in 1978, 6 percent more in cartons, 7 percent more sour milk products in cartons, 7 percent more sour cream, 3 percent more cream cheese, 25 percent more milk

Table 1.

Министерства (2)	(1) Производство масла из сырья государственных ресурсов, т										(14)
	всего (3)	в том числе									
		(4)	(5)	(6)	(7)	(8)	(9)	(12)		(13)	
								(10)	(11)		
(15) Министерство мясной и молочной промышленности СССР	1 324 150	726 404	106 864	3 211	11 761	356 197	90 768	4 561	24 844	103 535	2 091
(16) в том числе											
промышленность союзно- (17) го подчинения	68 650	41 727	2 944	631	10	21 709	816	168	639	4 201	—
промышленность союзно-республиканских министерств союзных рес- (18) публик	1 255 500	684 677	102 920	2 580	11 751	334 488	89 952	4 393	24 205	99 334	2 091
в том числе											
(19) РСФСР	611 650	411 099	13 489	1 347	5 536	97 064	65 258	3 578	14 277	42 964	—
(20) Украинской ССР	332 397	154 422	25 458	387	3 649	126 712	19 829	312	1 111	18 282	—
(21) Белорусской ССР	88 336	36 495	12 312	17	—	37 453	1 292	41	728	7 973	—
(22) Узбекской ССР	10 798	—	8 029	—	—	—	—	—	2 769	128	—
(23) Казахской ССР	55 953	31 254	1 731	810	—	17 955	1 073	449	2 664	2 415	—
(24) Грузинской ССР	1 365	—	603	—	—	—	—	—	762	—	—
(25) Азербайджанской ССР	4 473	2 320	2 034	—	—	3	—	—	116	—	—
(26) Литовской ССР	49 509	10 270	11 219	7	2 564	24 834	476	—	139	7 617	—
(27) Молдавской ССР	18 574	8 322	1 360	4	—	8 418	417	13	40	3 489	—
(28) Латвийской ССР	34 005	10 046	12 789	—	—	10 191	960	—	10	5 568	—
(29) Киргизской ССР	9 826	2 089	993	—	—	5 975	409	—	360	1 392	—
(30) Таджикской ССР	5 025	499	3 974	2	—	—	—	—	550	—	—
(31) Армянской ССР	1 262	—	912	—	—	—	—	—	350	912	2 091
(32) Туркменской ССР	3 210	9	1 521	—	—	1 351	—	—	329	—	—
(33) Эстонской ССР	29 115	17 852	6 496	6	—	4 532	229	—	—	8 594	—

Key:

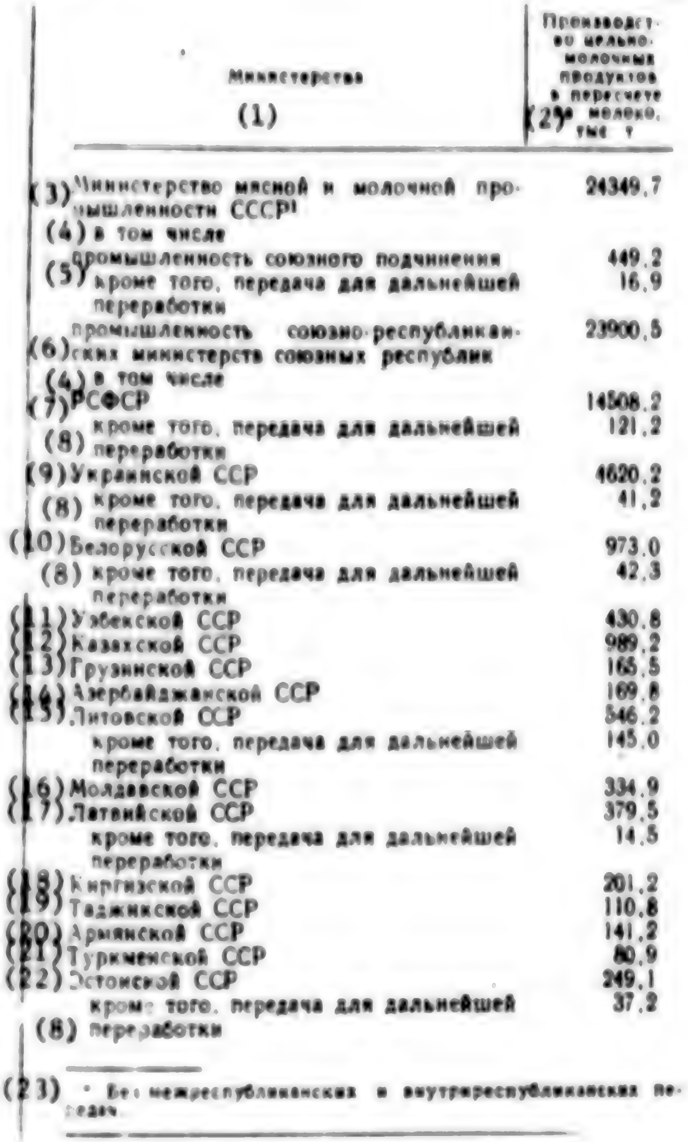
1. Butter production from state raw material resources
2. Ministries
3. Total
4. Peasant
5. Unsalted
6. Salted
7. Vologda
8. Gourmet
9. Table butter
10. With fillers
11. Clarified
12. Including
13. Packaged (from state raw material resources)
14. Additionally, packaged butter from trade organizations, tons
15. USSR Ministry of the Meat and Dairy Industry
16. Including
17. Industry under union jurisdiction

[Key continued on following page]

[Key to Table 1 continued]

18. Industry of union-republic ministries of union republics
19. RSFSR
20. Ukrainian SSR
21. Belorussian SSR
22. Uzbek SSR
23. Kazakh SSR
24. Georgian SSR
25. Azerbaijan SSR
26. Lithuanian SSR
27. Moldavian SSR
28. Latvian SSR
29. Kirgiz SSR
30. Tajik SSR
31. Armenian SSR
32. Turkmen SSR
33. Estonian SSR

Table 2.



Министерства (1)	(2) Производство цельномолочных продуктов в пересчете на молоко, тыс т
(3) Министерство мясной и молочной промышленности СССР[1]	24349,7
(4) в том числе	
(5) промышленность союзного подчинения	449,2
кроме того, передача для дальнейшей переработки	16,9
(6) промышленность союзно-республиканских министерств союзных республик	23900,5
(4) в том числе	
(7) РСФСР	14508,2
(8) кроме того, передача для дальнейшей переработки	121,2
(9) Украинской ССР	4620,2
(8) кроме того, передача для дальнейшей переработки	41,2
(10) Белорусской ССР	973,0
(8) кроме того, передача для дальнейшей переработки	42,3
(11) Узбекской ССР	430,8
(12) Казахской ССР	989,2
(13) Грузинской ССР	165,5
(14) Азербайджанской ССР	169,8
(15) Литовской ССР	546,2
кроме того, передача для дальнейшей переработки	145,0
(16) Молдавской ССР	334,9
(17) Латвийской ССР	379,5
кроме того, передача для дальнейшей переработки	14,5
(18) Киргизской ССР	201,2
(19) Таджикской ССР	110,8
(20) Армянской ССР	141,2
(21) Туркменской ССР	80,9
(22) Эстонской ССР	249,1
(8) кроме того, передача для дальнейшей переработки	37,2

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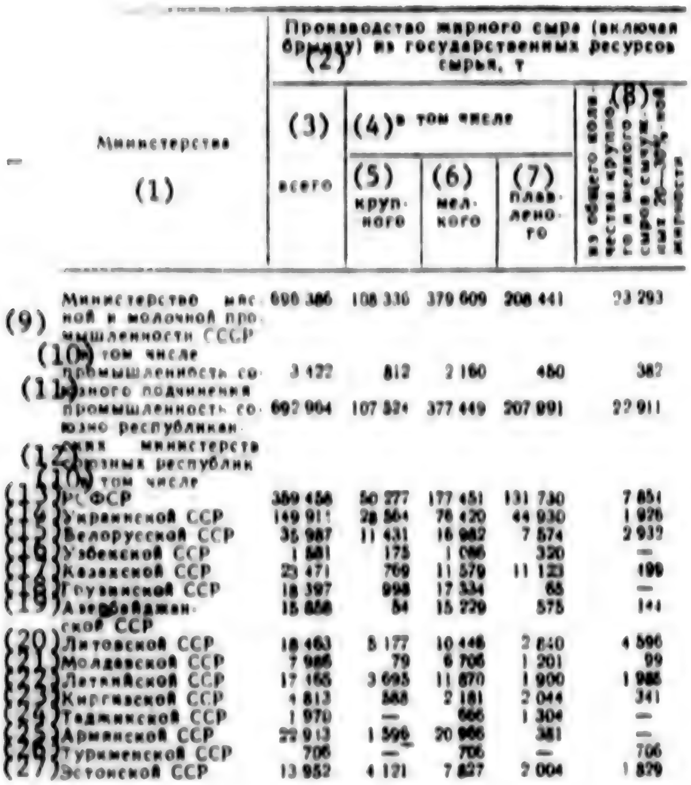
(23) [1] Без межреспубликанских и внутриреспубликанских передач.

Key:

1. Ministries
2. Production of whole milk products calculated in tons of milk
3. USSR Ministry of the Meat and Dairy Industry*
4. Including
5. Industry of union jurisdiction, plus that sent for further processing
6. Industry of union-republic ministries of union republics
7. RSFSR
8. Additionally, transfer for subsequent processing
9. Ukrainian SSR
10. Belorussian SSR
11. Uzbek SSR
12. Kazakh SSR
13. Georgian SSR
14. Azerbaijan SSR
15. Lithuanian SSR
16. Moldavian SSR
17. Latvian SSR
18. Kirgiz SSR
19. Tajik SSR
20. Armenian SSR
21. Turkmen SSR
22. Estonian SSR
23. Not including interrepublic and intrarepublic transfers

Table 3.



Министерства (1)	Производство жирного сыра (включая брынзу) из государственных ресурсов сырья, т (2)				
	(3) всего	(4) в том числе			(8) из общего количества крупного и мелкого сыров сычужных 20–30% жирности
		(5) крупного	(6) мелкого	(7) плавленого	
(9) Министерство мясной и молочной промышленности СССР	696 386	108 336	379 609	208 441	23 293
(10) в том числе					
(11) промышленность союзного подчинения	3 422	812	2 160	480	382
(12) промышленность союзно-республиканских министерств союзных республик	692 964	107 524	377 449	207 961	22 911
(10) в том числе					
(13) РСФСР	359 458	50 277	177 451	131 730	7 851
(14) Украинской ССР	149 911	28 561	76 420	44 930	1 926
(15) Белорусской ССР	35 987	11 431	16 982	7 574	2 932
(16) Узбекской ССР	1 581	175	1 086	320	—
(17) Казахской ССР	23 471	769	11 579	11 123	199
(18) Грузинской ССР	18 397	998	17 334	65	—
(19) Азербайджанской ССР	15 888	84	15 229	575	144
(20) Литовской ССР	18 463	5 177	10 446	2 840	4 596
(21) Молдавской ССР	7 986	79	6 706	1 201	99
(22) Латвийской ССР	17 165	3 695	11 570	1 900	1 985
(23) Киргизской ССР	4 813	588	2 181	2 044	341
(24) Таджикской ССР	1 970	—	666	1 304	—
(25) Армянской ССР	22 913	1 596	20 966	351	—
(26) Туркменской ССР	706	—	706	—	706
(27) Эстонской ССР	13 952	4 121	7 827	2 004	1 829

Key:

1. Ministries
2. Production of fatty cheeses (including sheep milk cheese) from state raw material resources
3. Total
4. Including
5. Large
6. Small
7. Melted
8. Of the overall quantity of large and small rennet cheeses with 20-30 percent fat content
9. USSR Ministry of the Meat and Dairy Industry
10. Including
11. Industry of union jurisdiction
12. Industry of union-republic ministries of union republics
13. RSFSR
14. Ukrainian SSR
15. Belorussian SSR
16. Uzbek SSR
17. Kazakh SSR
18. Georgian SSR
19. Azerbaijan SSR
20. Lithuanian SSR
21. Moldavian SSR
22. Latvian SSR
23. Kirgiz SSR
24. Tajik SSR
25. Armenian SSR
26. Turkmen SSR
27. Estonian SSR

Table 4.

Министерства (1)	(2) Производство		
	(3) молочных консервов, тыс. условных банок	сухого молока цельного, сухих сливок и сухих смесей, т (4)	в том числе молока для детей раннего возраста, т (5)
(6) Министерство мясной и молочной промышленности СССР	1 347 098	223 758	25 877
(7) в том числе			
(8) промышленность союзного подчинения	1 186 010	181 584	25 877
(9) промышленность союзно-республиканских министерств союзных республик	161 088	42 174	—
(7) в том числе			
(10) РСФСР	56 797	24 487	—
(11) Украинской ССР	618	8 736	—
(12) Казахской ССР	—	5 419	—
(13) Литовской ССР	10 037	—	—
(14) Молдавской ССР	—	421	—
(15) Латвийской ССР	79 515	1 073	—
(16) Киргизской ССР	1 412	—	—
(17) Эстонской ССР	12 709	2 038	—

Key:

1. Ministries
2. Production
3. Canned milk, standard cans
4. Dry whole milk, dry cream and dry mixtures, tons
5. Including milk for young children, tons
6. USSR Ministry of the Meat and Dairy Industry
7. Including
8. Industry of union jurisdiction
9. Industry of union-republic ministries of union republics
10. RSFSR
11. Ukrainian SSR
12. Kazakh SSR
13. Lithuanian SSR
14. Moldavian SSR
15. Latvian SSR
16. Kirgiz SSR
17. Estonian SSR

Table 5

Министерства (1)	(2) Производство цельномолочной продукции в ассортименте из сырья государственных ресурсов, т											
	молока цельного (5)	(3) из него						кисломолочных продуктов (13)	(4) в том числе			
		витаминизированного (6)	(7) пастеризованного			топленого (11)	стерилизованного (12)		ацидофилина и ацидофильного молока (14)	йогурта 6%-ной жирности (15)	ряженки (16)	кефира жирного (17)
			6%-ной жирности (8)	2,5%-ной жирности (9)	1%-ной жирности (10)							
(18) Министерство мясной и молочной промышленности СССР	11 339 410	410 065	108 378	6 519 337	27 627	63 859	83 363	1 711 976	15 704	449	117 447	1 160 485
в том числе												
(19) промышленность союзного подчинения	240 372	1 572	—	146 069	8	—	—	20 401	—	—	8	18 640
(20) промышленность союзно-республиканских министерств союзных республик	11 099 038	408 493	108 378	6 373 268	27 619	63 859	83 363	1 691 575	15 704	449	117 439	1 141 845
в том числе												
(21) РСФСР	6 864 018	142 550	100 288	3 994 954	4 174	25 516	53 200	974 906	7 584	327	35 571	713 941
(22) кроме того, передача для дальнейшей переработки	121 199	—	—	—	—	—	—	—	—	—	—	—
(23) Украинской ССР	2 269 870	132 167	—	1 387 912	14 864	32 981	29 581	277 375	3 468	—	57 911	173 670
кроме того, передача для дальнейшей переработки	39 082	—	—	—	—	—	—	—	—	—	—	—
(24) Белорусской ССР	432 470	22 452	103	272 932	1 766	1 039	582	60 157	970	—	749	57 289
кроме того, передача для дальнейшей переработки	41 679	—	—	—	—	—	—	—	—	—	—	—
(25) Узбекской ССР	176 760	2 800	—	32 379	—	921	—	57 874	1 144	22	9 421	2 896
(26) Казахской ССР	465 951	29 438	—	298 095	3 833	—	—	92 796	662	—	111	70 374
(27) Грузинской ССР	74 915	19 922	422	6 867	—	—	—	14 073	1 416	—	—	792
(28) Азербайджанской ССР	66 695	4 593	870	10 545	—	—	—	24 082	163	—	—	2 124
(29) Литовской ССР	165 307	2 633	202	21 617	—	—	—	42 885	—	—	95	42 733
(22) кроме того, передача для дальнейшей переработки	145 048	—	—	—	—	—	—	—	—	—	—	—
(30) Молдавской ССР	92 194	16 590	6 157	41 387	—	—	—	22 056	—	100	1 503	16 029
(31) Латвийской ССР	172 858	15 154	—	166 894	—	—	—	26 323	—	—	—	26 228
(22) кроме того, передача для дальнейшей переработки	4 556	—	—	—	—	—	—	—	—	—	—	—
(32) Киргизской ССР	85 800	13 787	336	21 015	2 752	3 402	—	17 652	165	—	892	13 125
(33) Таджикской ССР	43 569	—	—	6 362	230	—	—	17 651	—	—	9 418	2 913
(34) Армянской ССР	37 370	3 014	—	—	—	—	—	33 604	—	—	—	—
(35) Туркменской ССР	23 870	—	—	—	—	—	—	13 369	132	—	1 768	3 793
(36) Эстонской ССР	127 391	3 393	—	112 309	—	—	—	16 672	—	—	—	15 938
(22) кроме того, передача для дальнейшей переработки	26 213	—	—	904	—	—	—	99	—	—	—	99

Table 3, continued

Министерства (1)	(2) Производство цельномолочной продукции в ассортименте из сырья государственных ресурсов, т												
	(4) в том числе			(40) сливок всего	(41) в том числе 35%-ной жирности	сметаны всего (42)	(4) в том числе			(46) сырковой массы	творога жирного всего (47)	(4) в том числе	
	(37) кефира Таллинского	(38) кефира 2.5%-ной жирности	(39) простокваши и варенца				(43) 30%-ной жирности	(44) 25%-ной жирности	(45) 20%-ной жирности			(48) 9%-ной жирности	(49) 18%-ной жирности
(18) Министерство мясной и молочной промышленности СССР	147 887	472 835	282 604	310 593	10 329	1 390 818	8393	256 955	954 899	20 215	481 622	356 292	112 029
в том числе													
(19) промышленность союзного подчинения	984	7809	868	1918	1	26 887	59	11 731	10 637	157	7252	6192	1036
(20) промышленность союзно-республиканских министерств союзных республик	146 903	465 026	281 736	308 675	10 328	1 363 931	8334	245 224	944 262	20 058	474 370	349 100	110 993
в том числе													
(21) РСФСР	29 834	349 117	139 801	206 834	3704	810 799	1913	115 567	599 214	17 463	292 206	198 832	81 590
(22) кроме того, передача для дальнейшей переработки	—	—	—	—	—	—	—	—	—	—	—	—	—
(23) Украинской ССР	82 490	1713	17 285	46 131	2137	312 943	164	800	309 633	1542	78 464	67 543	10 481
(22) кроме того, передача для дальнейшей переработки	—	—	—	86	74	148	—	—	—	—	—	—	—
(24) Белорусской ССР	3981	32 362	606	12 042	1	61 962	—	45 189	7165	84	15 883	14 867	471
(22) кроме того, передача для дальнейшей переработки	—	—	—	61	—	—	—	—	—	—	—	—	—
(25) Узбекской ССР	—	—	38 226	4566	308	13 203	—	2867	—	55	7758	5173	2294
(26) Казахской ССР	5654	48 108	11 912	22 942	88	51 131	—	31 033	13 789	503	15 721	12 632	3089
(27) Грузинской ССР	—	—	11 865	257	—	5452	551	744	—	244	5758	2464	3126
(28) Азербайджанской ССР	—	—	13 263	39	—	5749	645	—	759	—	4041	1375	2665
(29) Литовской ССР	5313	10 895	57	3337	355	21 630	3592	5818	279	11	17 073	13 170	3775
(22) кроме того, передача для дальнейшей переработки	—	—	—	—	—	—	—	—	—	—	—	—	—
(30) Молдавской ССР	2505	142	1198	2409	414	18 512	—	7803	243	—	15 635	13 341	1755
(31) Латвийской ССР	—	19 603	94	1331	1309	24 723	—	21 488	—	—	7690	7657	2
(22) кроме того, передача для дальнейшей переработки	—	—	—	1170	—	—	—	—	—	—	—	—	—
(32) Киргизской ССР	5272	3086	1293	1913	28	9102	—	2621	117	4	2915	2062	755
(33) Таджикской ССР	382	—	4365	1082	—	4133	—	2980	491	—	1603	1520	—
(34) Армянской ССР	—	—	33 604	410	—	8268	—	7996	—	—	2576	2330	87
(35) Туркменской ССР	333	—	7333	258	31	3568	1469	—	306	6	1291	383	908
(36) Эстонской ССР	11 139	—	834	5124	1953	12 756	—	298	12 266	146	5756	5751	5
(22) кроме того, передача для дальнейшей переработки	81	—	—	202	175	703	—	4	100	—	1016	1016	—

Key to Table 5.

1. Ministries
2. Production of assorted whole-milk products from raw material of state resources, tons
3. Of this
4. Including
5. Whole milk
6. Vitamin enriched
7. Pasteurized
8. 6-percent fat content
9. 2.5-percent fat content
10. 1-percent fat content
11. Baked
12. Sterilized
13. Sour milk products
14. Acidophyline and acidulated milk
15. Yoghurt with 6-percent fat content
16. Thin sour cream
17. Fattey kefir
18. USSR Ministry of the Meat and Dairy Industry, including
19. Industry of union jurisdiction
20. Industry of union-republic ministries of union republics, including
21. RSFSR
22. Additionally, that transferred for further processing
23. Ukrainian SSR
24. Belorussian SSR
25. Uzbek SSR
26. Kazakh SSR
27. Georgian SSR
28. Azerbaijan SSR
29. Lithuanian SSR
30. Moldavian SSR
31. Latvian SSR
32. Kirgiz SSR
33. Tajik SSR
34. Armenian SSR
35. Turkmen SSR
36. Estonian SSR
37. Tallin kefir
38. Kefir with 2-percent fat content
39. Sour milk and fermented boiled milk
40. All kinds of cream
41. Including with 35-percent fat content
42. All kinds of sour cream
43. 36- and 40-percent fat content
44. 25-percent fat content
45. 20-percent fat content
46. Curds
47. Fatty curds, total
48. 9-percent fat content
49. 18-percent fat content

Table 6.

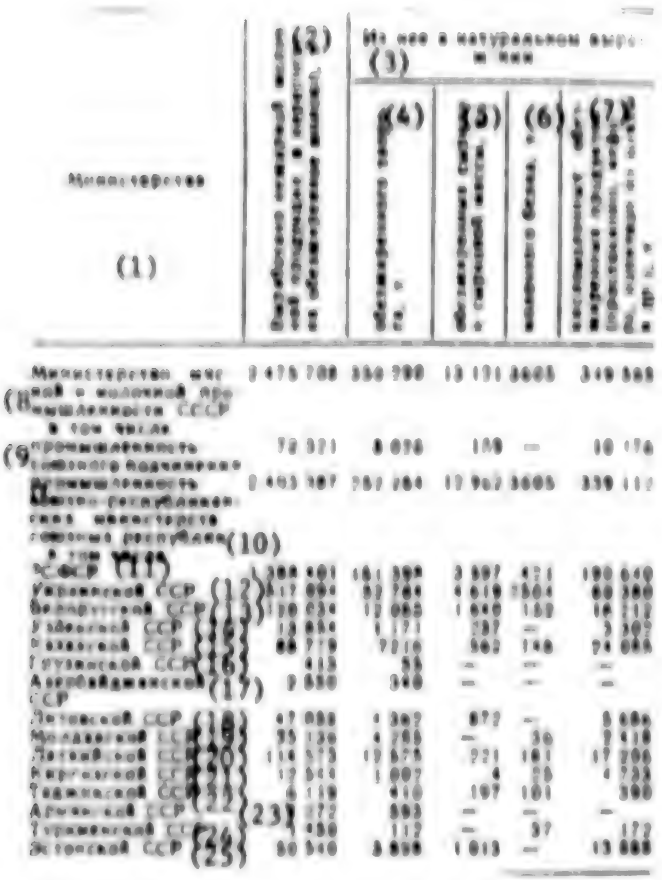
Министерства (1)	(2)	(3) В том числе	
		(4)	(5) ЗЦМ, т
(6) Министерство мясной и молочной промышленности СССР	303 254	120 153	183 101
в том числе			
(7) промышленность союзного подчинения	12 485	943	11 542
(8) из нее Союзконсервмолоко	11 604	939	10 665
(9) промышленность союзно-республиканских министерств союзных республик	296 769	125 210	171 559
в том числе			
(10) РСФСР	153 553	58 090	95 463
(11) Украинской ССР	69 110	24 457	44 653
(12) Белорусской ССР	24 679	14 717	9 962
(13) Узбекской ССР	—	—	—
(14) Казахской ССР	6060	2740	3320
(15) Грузинской ССР	—	—	—
(16) Азербайджанской ССР	—	—	—
(17) Литовской ССР	9576	6965	2611
(18) Молдавской ССР	9245	3900	5345
(19) Латвийской ССР	4050	2979	1071
(20) Киргизской ССР	1343	1095	248
(21) Таджикской ССР	—	—	—
(22) Армянской ССР	—	—	—
(23) Туркменской ССР	—	—	—
(24) Эстонской ССР	19 153	10 267	8886

Key:

1. Ministries
2. Production of dry nonfat milk, including whole milk substitutes from state raw material resources, tons
3. Including
4. Dry nonfat milk and dry buttermilk, tons
5. Whole milk substitutes, tons
6. USSR Ministry of the Meat and Dairy Industry, including
7. Industry of union jurisdiction
8. Of this, Soyuzkonservmoloko
9. Industry of union-republic ministries of union republics, including

10.	RSFSR	15.	Georgain SSR	20.	Kirgiz SSR
11.	Ukrainian SSR	16.	Azerbaijan SSR	21.	Tajik SSR
12.	Belorussian SSR	17.	Lithuanian SSR	22.	Armenian SSR
13.	Uzbek SSR	18.	Moldavian SSR	23.	Turkmen SSR
14.	Kazakh SSR	19.	Latvian SSR	24.	Estonian SSR

Table 7.


(1)
(2)
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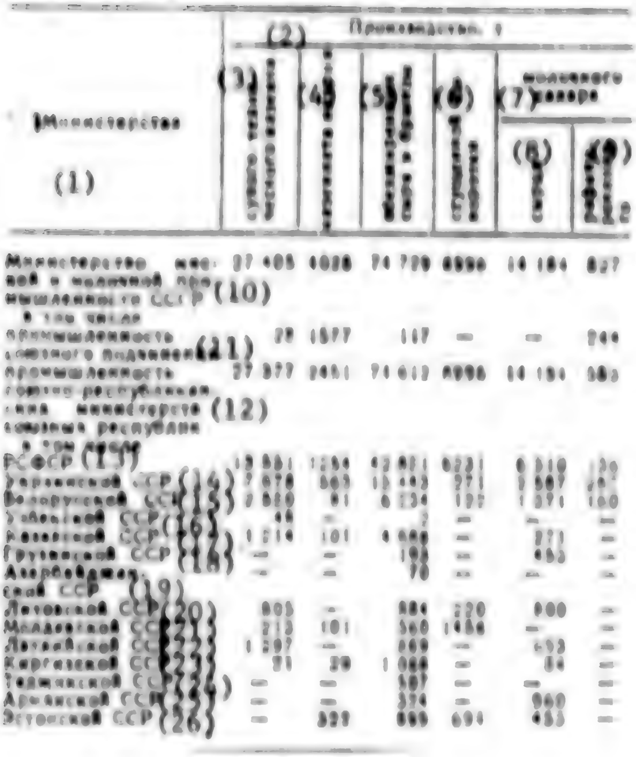
(14)
(15)
(16)
(17)
(18)
(19)
(20)
(21)
(22)
(23)
(24)
(25)

Key:

1. Ministries
2. Nonfat milk products produced, calculated in terms of nonfat milk, tons
3. Of these, in physical terms
4. Nonfat curds
5. Nonfat cheese curds and cheese curd mass, tons
6. Milk protein, tons
7. Sour milk nonfat products (yoghurt, kefir, drinks mad of buttermilk and so forth), tons
8. USSR Ministry of the Meat and Dairy Industry, including
9. Industry of union jurisdiction
10. Industry of union-republic ministries of union republics, including
11. RSFSR
12. Ukrainian SSR
13. Belorussian SSR
14. Uzbek SSR
15. Kazakh SSR
16. Georgian SSR
17. Azerbaijan SSR
18. Lithuanian SSR
19. Moldavian SSR
20. Latvian SSR
21. Kirgiz SSR
22. Tajik SSR
23. Armenian SSR
24. Turkmen SSR
25. Estonian SSR

Table 8.


Производство, т
Министерства
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)
(12)
(13)
(14)
(15)
(16)
(17)
(18)
(19)
(20)
(21)
(22)
(23)
(24)
(25)
(26)

Key:

1. Ministries
2. Production, tons
3. Dry industrial casein
4. Sodium caseinate
5. Nonfat cheese and sheep's milk cheese
6. Condensed whey
7. Lactose
8. Crude
9. Refined
10. USSR Ministry of the Meat and Dairy Industry, including
11. Industry of union jurisdiction
12. Industry of union-republic ministries of union republics, including
13. RSFSR
14. Ukrainian SSR
15. Belorussian SSR
16. Uzbek SSR
17. Kazakh SSR
18. Georgian SSR
19. Azerbaijan SSR
20. Lithuanian SSR
21. Moldavian SSR
22. Latvian SSR
23. Kirgiz SSR
24. Tajik SSR
25. Armenian SSR
26. Estonian SSR

Table 9

(1) Министерства	(2) Производство расфасованной цельномолочной продукции, т												
	(3) [illegible] в жидком виде в таре вместимостью 0,2 л	(4) цельного молока		(7) кисломолочных продуктов		(10) сливок	(11) сметаны	(12) сырков жирных	(13) сырковой массы жирной	(14) творога жирного	(15) всего в натуральном выражении	(16) в том числе [illegible] до 0,25 л [illegible]
		(5) в бутылках	(6) в пакетах	(8) в стеклянной таре	(9) в пакетах							
(17) Министерство мясной и молочной промышленности СССР	2653	3 104 210	2 345 558	1 517 267	189 671	288 739	268 654	95 752	9 270	206 094	8 027 390	109 164
в том числе												
(18) промышленность союзного подчинения	256	38 533	51 894	16 225	4 151	1 897	1 628	1 009	63	2 049	117 449	1 574
(19) промышленность союзно-республиканских министерств союзных республик	2397	3 065 677	2 293 664	1 501 042	185 520	286 842	267 026	94 743	9 207	204 045	7 909 941	107 590
в том числе												
(20) РСФСР	—	1 699 785	1 410 022	867 836	106 464	192 080	123 909	59 305	8 663	112 470	4 580 534	71 165
(21) Украинской ССР	2397	710 469	397 011	231 827	45 548	43 229	58 762	18 596	—	35 922	1 541 364	13 965
(22) Белорусской ССР	—	143 219	126 365	57 896	2 292	11 211	9 275	3 339	2	6 252	359 820	2 923
(23) Узбекской ССР	—	19 240	23 869	56 282	1 520	4 004	2 789	992	—	4 543	113 239	2 979
(24) Казахской ССР	—	127 800	54 536	87 165	3 493	22 607	8 001	4 307	165	8 697	316 761	2 119
(25) Грузинской ССР	—	32 913	16 388	14 073	—	—	4 239	—	244	3 671	71 527	1 329
(26) Азербайджанской ССР	—	713	36 762	23 711	371	39	4 975	914	—	3 563	71 511	432
(27) Литовской ССР	—	90 706	54 395	38 374	3 800	3 083	12 994	2 344	—	10 164	217 572	3 407
(28) Молдавской ССР	—	48 013	12 344	22 056	—	1 987	5 975	866	—	6 397	97 638	2 258
(29) Латвийской ССР	—	73 188	72 004	19 158	7 165	1 124	13 715	1 218	—	2 146	180 718	456
(30) Киргизской ССР	—	27 044	10 713	14 272	2 127	1 834	2 007	565	4	1 914	60 480	2 025
(31) Таджикской ССР	—	13 032	9 846	17 385	199	1 082	1 827	754	—	1 041	45 146	2 241
(32) Армянской ССР	—	23 070	9 169	33 604	—	410	8 268	124	—	2 576	77 221	1 954
(33) Туркменской ССР	—	469	2 312	13 203	—	126	507	268	—	796	17 681	106
(34) Эстонской ССР¹	—	56 016	57 928	4 201	12 571	4 046	9 784	1 151	129	3 903	149 729	534

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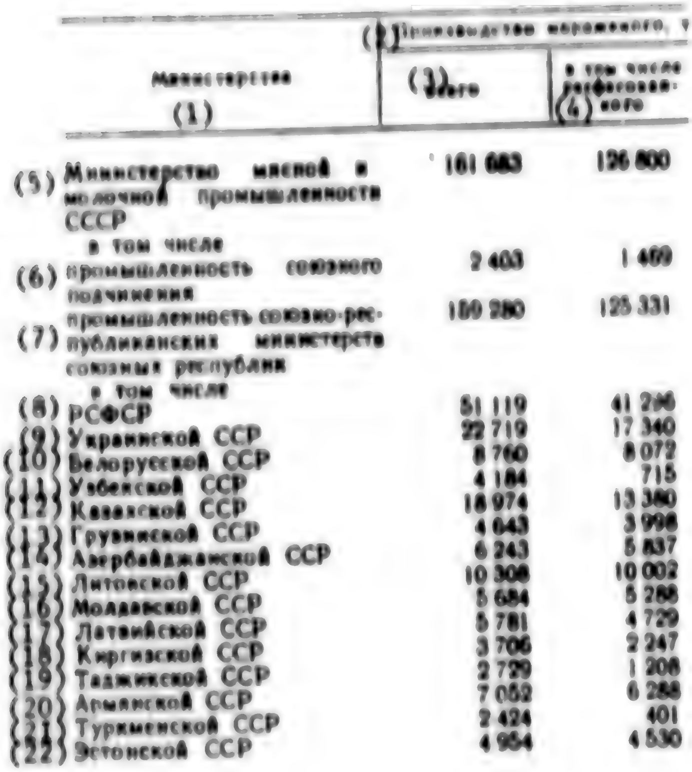
(35) ¹ Кроме того, отгрузка	—	—	816	—	99	31	78	14	—	29	1 112	—

Key to Table 9.

1. Ministries
2. Production of packaged whole milk products, tons
3. "Vitalakt" whole milk in liquid form in 0.2-liter containers
4. Whole milk
5. In bottles
6. In cartons
7. Sour milk products
8. In glass containers
9. In cartons
10. Cream
11. Sour cream
12. Fatty cheese curds
13. Fatty cheese curd mass
14. Fatty cottage cheese
15. Total in physical terms
16. Including pasteurized or boiled milk and sour milk drinks in containers of up to 0.25 liters, inclusive
17. USSR Ministry of the Meat and Dairy Industry, including
18. Industry of union jurisdiction
19. Industry of union-republic ministries of union republics, including
20. RSFSR
21. Ukrainian SSR
22. Belorussian SSR
23. Uzbek SSR
24. Kazakh SSR
25. Georgian SSR
26. Azerbaijan SSR
27. Lithuanian SSR
28. Moldavian SSR
29. Latvian SSR
30. Kirgiz SSR
31. Tajik SSR
32. Armenian SSR
33. Turkmen SSR
34. Estonian SSR
35. Additionall, dispatched

Table 10.



(1) Министерства	(2) Производство мороженого, т	
	(3) всего	в том числе расфасованного (4)
(5) Министерство мясной и молочной промышленности СССР	161 683	126 800
в том числе		
(6) промышленность союзного подчинения	2 403	1 469
(7) промышленность союзно-республиканских министерств союзных республик	159 280	125 331
в том числе		
(8) РСФСР	51 119	41 296
(9) Украинской ССР	22 719	17 340
(10) Белорусской ССР	8 760	8 072
(11) Узбекской ССР	4 184	715
(12) Казахской ССР	18 974	13 380
(13) Грузинской ССР	4 643	3 998
(14) Азербайджанской ССР	6 243	5 837
(15) Литовской ССР	10 308	10 002
(16) Молдавской ССР	5 684	5 288
(17) Латвийской ССР	5 781	4 729
(18) Киргизской ССР	3 706	2 247
(19) Таджикской ССР	2 729	1 208
(20) Армянской ССР	7 052	6 288
(21) Туркменской ССР	2 424	401
(22) Эстонской ССР	4 954	4 530

Key:

1. Ministries
2. Production of ice cream, tons
3. Total
4. Packaged
5. USSR Ministry of the Meat and Dairy Industry, including
6. Industry of union jurisdiction
7. Industry of union-republic ministries of union republics, including
8. RSFSR
9. Ukrainian SSR
10. Belorussian SSR
11. Uzbek SSR
12. Kazakh SSR
13. Georgian SSR
14. Azerbaijan SSR
15. Lithuanian SSR
16. Moldavian SSR
17. Latvian SSR
18. Kirgiz SSR
19. Tajik SSR
20. Armenian SSR
21. Turkmen SSR
22. Estonian SSR

Table 11.

Министерства (1)	Производство продукции высшего сорта, % к общему количеству (2)		
	масла (3)		
	сливочного (4)	топленого (5)	сыра сычужного (6)
Министерство мясной и молочной промышленности СССР (7)	97.1	77	68.5
в том числе			
промышленность союзного подчинения (8)	97.3	80.8	84.4
из нее Союзконсервмолоко (9)	97.1	79.6	73.1
промышленность союзно-республиканских министерств союзных республик (10)	97.1	76.9	68.4
в том числе			
РСФСР (11)	97.1	84.2	58.1
Украинской ССР (12)	99.6	78.4	72.9
Белорусской ССР (13)	97.2	98.4	75
Узбекской ССР (14)	10.7	13.6	63.1
Казахской ССР (15)	93.3	91	65.3
Грузинской ССР (16)	94	89.9	91.7
Азербайджанской ССР (17)	98	86.2	67.4
Литовской ССР (18)	99.96	73.1	92.9
Молдавской ССР (19)	99.6	50	96.1
Латвийской ССР (20)	100	—	90.4
Киргизской ССР (21)	87.3	87.1	72.4
Таджикской ССР (22)	77.3	87	43.1
Армянской ССР (23)	99.2	100	90
Туркменской ССР (24)	60	68.4	—
Эстонской ССР (25)	100	—	92.9

Key:

1. Ministries
2. Production of products of highest grade, % of overall quantity
3. Butter
4. Cream
5. Clarified
6. Rennet cheese
7. USSR Ministry of the Meat and Dairy Industry, including
8. Industry of union jurisdiction
9. Of this, Soyuzkonservmoloko
10. Industry of union-republic ministries of union republics
11. RSFSR
12. Ukrainian SSR
13. Belorussian SSR
14. Uzbek SSR
15. Kazakh SSR
16. Georgian SSR
17. Azerbaijan SSR
18. Lithuanian SSR
19. Moldavian SSR
20. Latvian SSR
21. Kirgiz SSR
22. Tajik SSR
23. Armenian SSR
24. Turkmen SSR
25. Estonian SSR

for nursing children in 0.2-liter containers and 61 percent more milk and sour milk drinks in 0.2- and 0.25-liter containers.

During 1979 the output of creamery butter of the highest grade comprised 97.1 percent of the overall output (the assignment was for 96.6 percent), clarified butter -- 77 percent (plan, 72 percent) and rennet cheese -- 68.5 percent while the assignment was for 67.7 percent.

The best indicators for the quality of the creamery butter were achieved by the dairy industries of the Ukrainian SSR, the Lithuanian SSR, the Moldavian SSR, the Latvian SSR, the Armenian SSR and the Estonian SSR; clarified butter -- the RSFSR, the Belorussian SSR, the Kazakh SSR, the Georgian SSR, the Azerbaijan SSR, the Kirgiz SSR, the Tajik SSR and the Armenian SSR; and cheeses -- the Georgian SSR, the Lithuanian SSR, the Moldavian SSR, the Latvian SSR, the Armenian SSR and the Estonian SSR.

The output of creamery butter of the highest grade decreased as compared to 1978 in the Azerbaijan and Tadzhik SSR's; clarified butter -- in the Turkmen SSR; and cheeses -- in the Ukrainian SSR, the Azerbaijan SSR, the Kirgiz SSR and the Tajik SSR.

The information given in the text is supported by the figures in tables 1-11.

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AGRO-ECONOMICS AND ORGANIZATION

SPECIALIZATION IN POULTRY RAISING ASSOCIATIONS

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA No 8, Aug 80 pp 36-39

[Article by M. Aleksandrova, candidate of agricultural sciences and senior scientific fellow at the All-Union Scientific Institute for Agro-economics, and T. Yershova, economist: "Phase Specialization in Poultry Raising Associations"]

[Text] The process of establishing production associations in poultry farming actively began in the mid-1960s. At present more than 100 poultry production associations are in operation. The bulk of them--82 percent of the total--are concentrated in the RSFSR, UkSSR, Belorussian SSR and Kazakh SSR.

The production associations' membership includes 365 poultry concerns, of which 244 are poultry plants, 50 are poultry sovkhozes, 37 are reproductive facilities, 10 are state breeding plants, 24 are poultry breeding plants and 2 are incubatory poultry breeding stations. In 1978 the production associations produced about 10 billion eggs and 300,000 tons of meat, which comprises over 20 percent of the total poultry production done in the public sector.

The primary direction which the currently operative production associations have taken is that of egg production. Of the 365 poultry production concerns which make up their membership 230, or 63 percent, produce eggs and 135, or 37 percent, produce meat. At the same time it must be noted that many production associations have essentially a multibranch production structure. For example, of the 14 associations in Kazakh SSR only 5 engage in only one type of production. The basic indicators for the production activity of the associations, compared with the poultry plants, are given in Table 1; they are based on data for 1978.

In almost all their indicators the production associations significantly exceed normal concerns in Ptitseprom, the State Poultry Organization. At the same time we should bear in mind that the higher indicators for the associations were achieved, to a certain extent, as a result of the fact that production associations are established, as a rule, on the basis of

Table 1.
The Basic Indicators for the Production Activity of Poultry Production Associations Compared to Those of Concerns Operating Autonomously

	Production Associations	Concerns Not in Production Associations	Indicators of Associations in Percent of Those of Concerns
Number	83	892	X
Size of Production (average per association and concern):			
Poultry, in thousand head	425.3	149.5	284.5
Gross Production, in millions of rubles	15.3	4.7	325.5
Egg Productivity, in pieces	223	216	103.2
Labor Expenditures, in manhours:			
Per 1000 Eggs	3.1	3.7	83.8
Per Quintal Increase in Weight	10.0	18.2	54.9
Feed Expenditures, in quintals of feed units:			
Per 1000 Eggs	2.0	2.0	100.0
Per Quintal Increase in Weight	5.1	6.8	75.0
Production Cost, in rubles:			
1000 Eggs	56.7	60.2	94.2
1 Quintal Increase in Weight	155.9	193.1	80.8

Notes: 1. Calculations done on the basis of data from the Poultry Industry Organization.
2. Gross production given in 1973 prices.

the largest and best organized concerns in Ptitseprom. It is also important to stress that the concerns in the associations are currently undergoing a profound reorganization and restructuring of their entire production framework. It remains to institute precise intrabranch specialization of all elements that comprise the associations, and primarily intensive phase specialization. Therefore, the production associations are still far from realizing all the advantages of interfarm cooperation, which are primarily associated with the use of intensive production factors.

As a consequence of the great variety of means and methods used for establishing production associations they are characterized by great differences in the level of organizational and technical ties among the participating concerns. The vast majority of the associations--about 70 percent--have been established by mechanically consolidating single-type concerns with a complete herd cycle. For them it is, in essence, only the form of management that changes, and to a significantly lesser extent their organization and production technology. Such associations have been formed primarily on the basis of the oblast and republic trusts in Ptitseprom. At the moment about 20 percent of the associations are but partially specialized, chiefly in the final phase of production. And finally, about 10 percent of the associations have specialized their concerns in the three basic phases: the production of incubation eggs, the raising of replacement young fowl, and production for the market.

We have grouped the production associations by the level to which their phase specialization has developed. Three groups of associations have emerged: those with phase specialization in the three basic phases (I), those with partial specialization (II), and those where single-type concerns have been consolidated (III).

For analysis we selected associations engaged in egg production, each of which has been in operation for at least 2 years. The basic indicators for the activity of production associations with various levels of phase specialization are given in Table 2.

The production associations in group I are distinctive for their significantly higher level of production concentration. The average production capacity of the associations in this group exceeds that of the associations in group II and III in average annual stock of poultry by 1.4 and 2 times, respectively; and in terms of production--by 1.6 and 2.4 times. Egg productivity of the hens in production associations in group I, compared with those in groups II and III, is higher by 2.5 and 8.7 percent, respectively; direct labor expenditures are lower by 13 and 28 percent; feed--by 3.3 and 9.3 percent; production cost per 1,000 eggs--by 13.2 and 27.3 percent; and the profitability level is 1.2 and 2.1 times higher.

A comparative analysis of the production efficiency of associations with various levels of phase specialization, compared with the average indicators for Ptitseprom of the USSR, has shown that the associations in groups I and II are better than those for the concerns in Ptitseprom in regard to all indicators, without exception. As relates to the associations in group III, where there is no phase specialization, such production associations have even worse production efficiency than Ptitseprom.

When industrializing, the efficient use of primary production stocks is of particular significance. See Table 3.

Table 2.
Basic Indicators for the Activity of Produciton Associations (With Various Levels of Phase Specialization)

	Average-All Groups	Including			Group I in Percent of	
		I	II	III	II	III
No. Production Associations	41	9	15	17	X	X
Average Size of Production per Association:						
Poultry, in thousands of head	1214.8	1802.8	1262.0	914.0	142.8	197.2
Adults in that Number	596.7	935.2	614.8	431.2	152.0	217.0
Egg Production, in millions	128.6	213.7	132.4	87.6	161.4	244.0
Egg Productivity, in pieces	234.5	242.8	236.8	223.4	102.5	108.7
Expenditures per 1000 Eggs:						
Labor, in manhrs.	2.43	2.06	2.36	2.85	87.3	72.3
Feed, in quintals of feed units	1.85	1.77	1.83	1.95	96.7	90.7
Gross Production per Worker Engaged Directly in Production, in thousands of rubles	49.7	63.2	50.3	40.7	125.6	155.3
Production cost, in rubles:						
1000 Eggs	51.86	44.05	50.68	60.56	86.8	72.7
1 Quintal Weight Increase	181.50	179.86	178.86	182.15	100.5	98.7
Profitability, in percent	44.2	59.4	48.2	28.2	1.2 times	2.1 times

Note: 1. Gross production in 1973 prices.

Table 3.

Effectiveness of Use of the Primary Production Stocks In Production Associations with Various Levels of Phase Specialization

	GROUPS			Group I as a Percent of	
	I	II	III	II	III
Cost of Primary Production Funds with Agricultural Significance (average per association), in millions of rubles	33.8	23.5	21.9	143.8	153.6
Cost of Stocks, Calculated per Average Annual Laying, in rubles	30.7	31.7	33.9	96.8	90.6
1000 Eggs, in rubles	129.0	147.3	157.3	87.6	82.0
Gross Production per 100 Rubles of Stock, in rubles	79.6	74.0	55.9	107.6	142.4
Eggs, in pieces	775.0	678.0	635.0	114.3	122.0

Note: 1. Gross production in 1973 prices

The average cost of the primary production stocks for an association in group I is 1.5 times as much as that of group III. However, the average annual stock of laying hens and the production volume for the associations in group I is double that of the associations in group III. And this caused a lower production stock intensity and higher level of stock effectiveness in the associations of group I.

The experience of the leading associations convincingly indicates the great advantages and potential for the development of phase specialization in production.

We studied the experience of a leading production association--the Tomilinskoye Association in Moskovskaya Oblast, which was formed by developing and intensifying intrafarm specialization--to identify the specific conditions and factors which cause an increase in the production efficiency of the associations.

In this association the following production phases were identified as major specialized, territorially separate elements: the production of incubation eggs, the incubator, the raising of replacement young fowl from 1 to 66 days old; the production of eggs for market and the further raising of the replacement pullet are combined within one element. The management system has not yet undergone fundamental change but has basically retained the stamp which characterizes the sovkhoz system.

Research has established that the chief effect of phase specialization in a production association during the first stage was a sharp increase in production volume. Thus, in the first 3 years following its establishment production volume almost doubled. An analysis of the growth factors showed that 90-95 percent of the increase in production occurred because of an increase in the stock, and 5-10 percent--through an increase in poultry productivity.

The increase of the stock in the production association was achieved primarily by freeing production areas occupied earlier by the parent herd and used in raising the young fowl, and by accommodating these technical groups in reconstructed production areas. The territorial separation of production by technical stage opened broad opportunities for further increases in production capacity through expansion and new construction. Concurrently the association transitioned to the cooping of all technical groups of poultry using modern equipment. As a result the production capacity of the production association increased from 2,056,000 to 3,284,000 poultry spaces--or by 1,228,000--in a relatively short period. Moreover, 85-90 percent of this growth in capacity was acquired through reconstruction and expansion, and 10-15 percent--by improving the use of production areas.

During the period 1973-78 the production of eggs in the association nearly doubled, with an annual growth rate of 19 percent. The egg productivity of the hens rose from 225 to 241 eggs, or by 6.9 percent; labor expenditures were reduced by half; feed expenditures--by 13.5 percent; and production cost--by 7.8 percent. The efficiency with which the production stocks were used increased noticeably.

However, it should be noted that specialization is not occurring in all phases of production. Specifically, the production indicators for the raising of replacement of young fowl between 1 and 66 days old have noticeably improved. The average daily weight gain for a head of poultry has increased from 7.3 to 8.3 grams, or by 13.7 percent; attrition and intentional destruction of inferior animals have dropped from 30 to 20 percent; labor expenditures per quintal of weight gain have dropped from 29.7 to 8.4 manhours, or by more than three times; feed expenditures--from 5.7 to 5.1 quintals of feed units, or by 11 percent. Production expenses calculated per quintal of weight gain dropped, on the whole, from R153 to R130, or by 15 percent.

Certain production indicators for incubation eggs have improved. Thus, the herd turnover ratio dropped from 1.92 to 1.25, as a result of which the duration of use for laying hens increased from 6.2 to 9.6 months, or 1.5 times; egg productivity increased from 208 to 237, and if you take into account the herd turnover--from 109 to 190, or 1.7 times. Poultry loss was reduced, and the production cost of 1,000 eggs dropped from R80.4 to R68.3.

At the same time in such technical phases as the raising of young poultry from 67 to 150 days old and the production of eggs for the market, which are combined within the framework of one type of production, no significant qualitative shift in production efficiency has yet been noted. The improvement in the production indicators for marketable eggs was achieved almost exclusively by improving the turnover ratio for the herd.

When instituting phase specialization the creation of equal possibilities for all the concerns in the association acquires particular significance. From this point of view a determination of the level of production efficiency in the various phases is of great interest. We have calculated the production efficiency of the separate phases; see Table 4.

Table 4.
Comparative Production Efficiency in Various Phases At the Tomilinskoye Production Association

	Labor Expenditures, manhrs.		Production Cost in Rubles	Stock Intensity in Rubles	Stock Effectiveness in Rubles	Adduced Expenditures in Rubles
	Total	Direct				
Production of Incubation Eggs	10.9	5.7	73.9	115.3	86.7	87.7
Raising of Young Fowl:	13.4	6.7	105.8	143.6	69.6	123.1
1-66 Days Old	8.6	4.5	68.9	97.2	102.8	80.6
67-150 Days Old	18.8	9.5	161.1	214.1	46.7	186.8
Production of Eggs for Market	5.1	2.4	48.2	66.7	149.8	56.2
Average for All Phases	7.3	3.7	63.5	95.0	127.3	73.0

Undoubtedly, the methods used in computing the comparable prices has influenced somewhat the variations in the efficiency of the various phases. However, even taking this into account, the calculations done basically reflect the relationships which have developed and do so correctly. They can serve as the basis for developing norms for the expenditure of labor and material resources, and also in determining the level of estimated and sale prices.

The research done confirms that the establishment of production associations with appropriate organization ensures a significant increase in efficiency. At the same time there are in the experience of interfarm cooperatives cases of a formalistic approach being taken to the new forms of production organization. Certain production associations represent but a mechanical consolidation of single-type concerns with a closed loop production cycle. Only the form of management changes in such associations, while the organization of and technology used in production remain the same as before. Naturally, such production associations cannot fully enjoy the advantages of an interfarm division of labor.

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INVESTMENT IN KAZAKHSTAN LAND RECLAMATION

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[Article by K. S. Sydykov, candidate of economic sciences and director of the department of economics and production organization at the Kazakhstan Scientific Research Institute for Rice: "The Recovery of Capital Investment in Land Reclamation Under the Conditions of Kazakhstan"]

[Text] The decisions of the May (1966) Plenum of the CPSU Central Committee have had tremendous significance for increasing the sowing of rice in the lowlands of the Syr-dar'ya, Ili and Karatal Rivers. Rice is being cultivated on dozens of tracts in Kzyl-Ordinskaya, Alma-Atinskaya and Taldy-Kurganskaya Oblasts. The abundant warmth, sun and fertile soil here favor rice farming. But still, until recently, the harvests of rice, which is grown primarily in non-engineered rice systems, have failed to exceed 2.08 tons per hectare. In 1978, with an increase in the proportion of engineered rice irrigation systems in use, they reached 4 tons per hectare.

The state allots very great resources for land reclamation projects in Kazakhstan. Thus, R230 million was appropriated for the construction of engineered rice systems during the five-year period 1966-1970, and between 1976 and 1978 R190 million went for Kzyl-Ordinskaya Oblast alone. Between 1965 and 1978 engineered rice systems covering 180,000 hectares were built in the two primary rice farming oblasts of Kazakhstan: Kzyl-Ordinskaya and Chimkentskaya. Major projects to irrigate and agriculturally develop land used for rice are being conducted on the Levoberezhnyy Kzyl-Ordinskiy Tract. Here R237.2 million worth of capital investment has been done, and 42.3 thousand hectares of rice have been put into tillage. On the Kzyl-Kumskiy Tract the amount of capital investment in rice farming totaled R243 million, and the area sown with rice has grown by 20,000 hectares (The Kzyl-Kumskiy Tract is one of the first major engineered tracts in Kazakhstan, the development of which is proceeding in accordance with an integrated technical plan worked out by the All-Union State Institute for Rice Production). Six rice sovkhozes, each sown with 3,100 hectares of rice, are now in operation here. Naturally, the question arises of what the return will be and what the effectiveness is of the expenditures for capital investment in rice farming.

The effectiveness of capital investment increases primarily on those farms where rice is cultivated in engineered rice irrigation systems only. Such farms include the specialized sovkhozes on the Kzyl-Ordinskiy Levoberezhnyy and Kzyl-Kumskiy Irrigation Tracts. Each year the sovkhozes on these tracts cultivate an average of 2-3.5 thousand hectares of rice per farm. Here the yield of rice varies from 4.5 to 5 tons per hectare. Thus, in 1978 the yield on the rice sovkhoz "Kazakhstan" on the Kzyl-Kumskiy Tract, with an area of 3.1 thousand hectares, came to 6.1 tons per hectare. The sovkhoz earns a yearly profit of R500-580 per hectare from the sale of rice.

We have determined the effectiveness of capital investment in the construction of engineered rice irrigation systems by determining the effectiveness of capital invested in the irrigation and drainage of land and in the irrigation of pastures (1972). In determining the return on resources we took into account the yield of the rice, the normative expenditures per hectare of the crop and the sale price. The yield of the rice was taken as equal to 4.5-5 tons per hectare, the normative (actual) expenditure of material and financial resources per hectare of the crop--R848, and the sale price per ton of rice--R300. The term for repaying the cost of capital investment in the construction of engineered rice irrigation systems in this case was 4-6 years, while with a yield of 5.5-6 tons per hectare it was 2 years.

The increase in primary production stocks (particularly for irrigation and melioration) promotes the strengthening of the rice farms' material-technical base, facilitating the increase of production output per hectare and the economic efficiency of rice production. It is unacceptable that on some sovkhozes a significant portion of the capital investment remains sunk in incomplete construction. Land tracts technically prepared for rice cultivation are received late by the sovkhozes and remain out of use until the next year, which leads to an increase in direct production expenses. All this reduces the production efficiency of rice and the size of the profit earned by the farms.

The primary indicators which permit us to establish how effectively the land is used and how labor is conserved in the production process are the yield of rice and its production cost. As the rice yield increases, the production efficiency of capital investment grows as well. See Table 1.

Another reliable indicator of the economic efficiency of capital investment in rice farming is the amount of gross and marketable production obtained per R100 spent on basic production resources, compared with the amount of capital investment, calculated per hectare of arable land. There is a direct correlation between agricultural production per hectare of arable land and per ruble of production stocks. The intensification of production and better utilization of engineered rice irrigation systems yield a higher output of production for the same amount of basic and rotable stock, while an increase in the yield of rice leads to a reduction in the

Table 1.
The Effectiveness of Capital Investment
on the Rice-producing Sovkhozes of Kzyl-Ordinskaya Oblast
with Various Yields of Rice
(Averages, for 1976-1978)

Groups of Sovkhozes by Rice Yield, in Tons per Hectare	No. Sovkhozes in Group	Return per Ruble of Financial/Material Expenditure(in rubles)			
		Gross Production		Pure Profit	
		Total	For Additional Investment	Total	For Additional Investment
I (up to 3)	7	0.91	----	----	----
II (3-4)	8	0.99	8.47	----	----
III (4-5)	12	1.08	9.32	0.10	0.40
IV (over 5)	8	1.25	11.01	0.25	2.49

production costs for this valuable crop. The interrelationship between the size of the primary production stocks and the output of production is confirmed by data on the grouping of rice sovkhozes on the Kzyl-Ordinskiy Irrigation Tract. See Table 2.

As we see, an increase in rice yield and the reduction of its production cost depend upon the amount of the primary production stocks used per hectare of arable land. The economic conditions of the second group of sovkhozes, where the average cost of the primary stocks per hectare of arable land is R1.8 thousand, are optimal for the cultivation of rice in Kzyl-Ordinskaya Oblast.

Currently specialization and the concentration of agricultural production based on interfarm cooperation and agro-industrial integration are of top priority. The efficient use of modern technology for rice cultivation is only possible with optimal concentration of production. Specialized rice sovkhozes, of which there are 57 in the republic--even though they have achieved higher economic indicators than the nonspecialized ones--cannot take full advantage of large-scale production concentration without appropriate labor cooperation and agro-industrial integration. Capital investment in the construction of engineered rice irrigation systems yields the desired results. However, the process of amalgamating the rice sovkhozes

Table 2.
The Relationship of Primary Production Stocks to the Output of Rice Production (Averages, for 1976-1978)

Indicator	Groups of Sovkhozes, by Cost of Primary Production Stocks with Agricultural Significance, per Hectare of Arable Land (in thousands of rubles)			Average for Sovkhozes on Kzyl-Ordinskiy Irrigation Tract
	I	II	III	
	up to 1.5	1.5-2	over 2	
No. sovkhozes in group	11	17	7	35
Average cost of primary production stocks with agricultural significance, per hectare of arable land (in thousands of rubles)	1	1.8	2.2	1.6
No. of standard tractors per hundred hectares of arable land (in units)	2.5	2.6	2.8	2.6
Amount of mineral fertilizer used per hectare of rice sown (in tons)	0.2	0.28	0.32	0.27
Amount of gross production per ruble of investment (in rubles)	0.94	1.04	1.18	1.08
Amount of seed rice realized per hectare of arable land (in tons per hectare)	1.74	1.94	2.21	1.91
Average rice yield (in tons per hectare)	4.35	5.06	4.83	4.79
Production cost per ton of rice (in rubles)	242.6	208.6	235.4	228.7
Profit per hectare of arable land (in rubles)	83.44	165.3	120.7	132.36

based on interfarm cooperation and agro-industrial integration has not yet been properly developed. The first steps are already being taken to transition the oblast to agro-industrial integration. A major rice mill has been built in the center of Kzyl-Orda for additional treatment and cleaning of the rice; it has a capacity of 650,000 tons of rice seed per year. A rice mill with a capacity of 340,000 tons of rice per year is being built in Dzhalagashskiy Rayon, in the center of the major rice tracts.

The conservation of irrigation water is an important factor in the development of rice farming in Kazakhstan. The experience of the leading farms and the preliminary calculations have shown that, if we use 22,000-23,000 cubic meters of water per hectare of crops, then we will conserve 1.5 billion cubic meters of water. By doing so we can additionally expand the area of rice crops in the desert rice zone (Kzyl-Ordinskaya and Chimkentskaya Oblasts) by 20,000-25,000 hectares.

The potential for increasing the effectiveness of capital investment in rice farming is far from being fully utilized. This situation is linked to significant deficiencies in the planning and design of agricultural construction, to delays in the introduction of engineered rice systems into service, and to inadequately high rice harvests. Eliminating these deficiencies will permit us to raise rice farming in the republic to a higher level.

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